

WHAT IS CLAIMED IS:

1. A loudspeaker system comprising:  
a transducer;  
an enclosure for housing said transducer; and  
a port disposed in said enclosure for tuning the low frequency performance of said loudspeaker system, said port comprising  
a port tube extending at least in part outside of said enclosure, said port tube having a predetermined internal cross-sectional area, a first external cross-sectional area near an outermost end of said port tube and a second external cross-sectional area between said first external cross-sectional area and said enclosure such that said first external cross-sectional area is larger than said second external cross-sectional area, and  
a port cover for covering the outermost opening of said port tube, wherein said port cover is generally cup-shaped so as to fit over and overlap the outermost end of said port tube.
2. The loudspeaker system according to claim 1, wherein a distance measured between an internal surface of said port cover and an exterior of said port tube is maintained therebetween to be at least approximately equal to one-half of the radius the predetermined internal cross-sectional area of said port tube.
3. The loudspeaker system according to claim 2, wherein a second distance measured between an edge of said port cover nearest to said enclosure and a wall of said enclosure is greater than the average radius of the average cross-sectional area of said port tube such that the total cross-sectional area of an opening created between said port cover and said enclosure is substantially greater than said predetermined internal cross-sectional area of said port tube, such that any line drawn directly from a tangent point on an outer-most end of

said port tube through a tangent point on an edge of said port cover nearest to said enclosure intersects with a solid part of said loudspeaker system.

4. The loudspeaker system according to claim 1, wherein the total cross-sectional area of an opening created between said port cover and said enclosure is approximately five times greater than the predetermined internal cross-sectional area of said port tube.

5. The loudspeaker system according to claim 1, wherein the radius of a circle having an area equal to said first external cross-sectional area is at least 4 mm greater than the radius of a circle having an area equal to said second external cross-sectional area.

6. The loudspeaker system according to claim 1, wherein said port tube and said port cover are generally round.

7. The loudspeaker system according to claim 1, further comprising:

a recessed area disposed in said enclosure for accepting said port tube and said port cover such that an outer surface of said port cover is generally flush with the surrounding surfaces of said enclosure; and

drainage channels disposed in said recessed area such that water entering said recessed area drains away from said port tube.

8. The loudspeaker system according to claim 1, wherein an opening created between said port cover and said enclosure is covered by a screen.

9. The loudspeaker system according to claim 8, wherein the screen has open area greater than approximately 35% and closed area less than approximately 65%.